

Minicalc Spreadsheet

by Chris Stamboulidis

Minicalc is a spreadsheet program requiring a 24k VZ-200 system and an optional 80-column printer. It is based on a program written by Barry Spencer in the April 1984 issue of *Rainbow* magazine.

It features the following facilities:

- 9 x 43 cells on the spreadsheet
- tape storage and retrieval of data and functions
- dump to a printer
- column and row addition functions as well as +, -, *, /, ↑, absolute and integer functions
- non-destructive function view command to display formulae assigned to any cell

After you RUN the program, you will be greeted by the title screen and asked whether you require instructions. Hitting the 'Y' key will display the commands available and the syntax required to implement them. Note that when entering formulae for the cell functions, it is often necessary to use commas (such as when specifying cells). Unfortunately, the INPUT statement in Basic will not accept characters entered after a comma unless the entire input is enclosed in quotation marks. The result otherwise is an '7 extra ignored' error message.

Hitting 'Y' will enter the spreadsheet

proper and the upper left section will be displayed (there are 16 overlapping sections in all). The '>' prompt means that you may now enter a command.

To enter data, simply type Gx,y and hit (RETURN); x and y specify a cell x positions across and y positions down; this can be thought of as a GOTO command. When the 'G' cursor appears in the specified cell, you may enter numbers of strings up to 8 characters in length. From here, you may use the cursor control keys to move around the displayed section of the spreadsheet, entering data as you go. To get back to the command mode, simply hit (RETURN).

To enter formulae, use Fx,y where x and y specify the cell in which the result will be displayed. An 'F' cursor will appear in the cell specified and you will be prompted to type in the function into the two upper-most screen lines. Remember to use quote marks here, and hit (RETURN) when finished.

The four pre-set functions are:

- Ca,b gives the sum of the values appearing in the column from row a to row b
- Ra,b does the same in a row from column a to column b
- 'A' at the beginning or end of a for-

mula takes the absolute value of the result

- 'I' at the beginning or end takes the integer value of the result. When specifying cells, use square brackets eg, [3,13].

To view a function in a particular cell, use Vx,y, hitting (RETURN) to get back to the command mode.

Movement from section to section within the spreadsheet is via the MU, MD, ML, MR commands (move up, down, left & right). MH returns you to the upper leftmost section.

S and L are used for saving and loading from tape, and P enters the print mode.

U will update the entire spreadsheet, ie, all formulae will be calculated and the results displayed. Note that calculations occur from top to bottom, so that if a formula refers to a cell below it, you must update twice.

Finally, when typing in the program, the following characters should be entered in inverse text:

line 180 ; "7" - CHRS(255)
line 450 ; "G" - CHR\$(199)
line 510 ; "F" - CHR\$(198)

See also APC 5(12) p 214.

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10 ' ----MINICALC---- 5/6/84
12 ' REQUIRES 24K SYSTEM
15 CLS:PRINT@200,"M I N I C A L C"
20 CLEAR7000:DIML$(9,43),U(40),I$(9,43)
30 FORI=1TO32:S$=S$+" ":NEXT:S1$=LEFT$(S$,30):S2$=LEFT$(S$,29)
70 PRINT@489,"INSTRUCTIONS?";
72 W$=INKEY$:IFW$=""THEN72
74 IFW$="Y"THENGOSUB2000ELSEIFW$="N"THEN
90ELSE72
90 CLS
100 FORT=28736TO28767:POKET,32:NEXT:POKE28749,50:POKE28759,51
105. POKE28739,49:PRINT@96,"";
110 FORT=1TO12:PRINTRIGHT$(STR$(T),2):NEXT:PRINT"13";
130 FORT=28769TO29154STEP32:P=PEEK(T):IFP>63THENPOKET,P-64
135 NEXT
140 FORT=28768TO29153STEP32:P=PEEK(T):IFP>63THENPOKET,P-64
    
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150 NEXT:XS=0:YS=0
170 PRINT@0,S1$;
175 PRINT@0,">":PRINT:P=2:A$="":C$="":PR
INT@P,"";A$=INKEY$
180 A$=INKEY$:B$=INKEY$:IFA$=""THENPRINT
@P,"?";GOTO180
185 IFA$=B$THEN180
190 PRINT@P," ";IFA$=CHR$(13)THEN230
200 IFA$=CHR$(8)ANDLEN(C$)>0THENP=P-1:C$
=LEFT$(C$,P-2):GOTO180
210 C$=C$+A$
220 PRINT@P,A$;P=P+1:GOTO180
230 L$=LEFT$(C$,1)
240 IFL$="G"THENFx=0:GOTO330
250 IFL$="F"THENFx=1:GOTO330
260 IFL$="U"THENFx=2:GOTO330
270 IFL$="U"THEN940
280 IFL$="S"THEN970
290 IFL$="L"THEN1060
300 IFL$="M"THEN1170
310 IFL$="P"GOSUB1320
315 IFL$="Q"THEN2200
320 GOTO170
330 L$="":FORTx=2TOLEN(C$):M$=MID$(C$,Tx
,1):IFM$=","THEN360
340 L$=L$+M$
350 NEXT:GOTO170
360 L$=RIGHT$(L$,1):X=VAL(L$)-XS:IFX+XS>
9THEN170
370 L$=RIGHT$(C$,LEN(C$)-Tx)
380 Y=VAL(L$)-YS:IFY>14THEN170
390 IFFx<>2THEN430
400 IFLEN(I$(X+XS,Y+YS))=0THEN170ELSEI1=
1
410 PRINT@32,S$;PRINT@32,MID$(I$(X+XS,Y
+YS),1+32*(I1-1),32);
420 I1$=INKEY$:G$=INKEY$:IFI1$=""THEN420
422 IFI1$=G$THEN420
424 PRINT@32,S1$;
425 IFLEN(I$(X+XS,Y+YS))>32*I1THENI1=I1+
1:GOTO410ELSE170
430 IFX<10RX>30RY<10RY>13THEN170ELSEPRIN
T@32,S$;
440 P=Y*32+X*10+57:PRINT@P," 34 ";:
L$(X+XS,Y+YS)="
445 IFFx=1THENGOSUB510:GOTO170
450 A$=INKEY$:B$=INKEY$:IFA$=""THENPRINT
@P,"G";GOTO450
455 IFA$=B$THEN450

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460 PRINT@P," ";
465 IFA$=CHR$(13)THEN500ELSE IFA$=CHR$(10)
)THENY=Y+1:GOTO430
466 IFA$=CHR$(8)THENX=X-1:GOTO430
470 IFA$=CHR$(27)THENY=Y-1:GOTO430
475 IFA$=CHR$(9)THENX=X+1:GOTO430
480 IFA$=CHR$(8)ANDLEN(L$(X+XS,Y+YS))>0T
HENP=P-1:GOTO485ELSE490
485 L$(X+XS,Y+YS)=LEFT$(L$(X+XS,Y+YS),LE
N(L$(X+XS,Y+YS))-1)
486 GOTO450
490 L$(X+XS,Y+YS)=L$(X+XS,Y+YS)+A$:PRINT
@P,A$;:P=P+1
495 IFP<>511THEN450
500 GOTO170
510 PRINT@P,"F";:PRINT@0,I$(X+XS,Y+YS)
530 PRINT@0,S1$:PRINT@0,"";:INPUTI$:GOSU
B1150:O=0
535 I$(X+XS,Y+YS)=I$:XA=X+XS:YA=Y+YS
540 O=0:U(0)=0:FOR TX=1TOLEN(I$):M$=MID$(
I$,TX,1)
560 IFM$="[" THENX$="":Y$="":GOTO880
570 IFM$="<" THENX$="":Y$="":GOTO1110
580 IFM$="R" THEN750
590 IFM$="C" THEN750
600 NEXT:IX=0:U=U(0):O=1:FOR TX=1TOLEN(I$
):M$=MID$(I$,TX,1)
630 IFM$="*" THENU=U*U(0):GOTO930
640 IFM$="+" THENU=U+U(0):GOTO930
650 IFM$="/" THENU=U/U(0):GOTO930
660 IFM$="-" THENU=U-U(0):GOTO930
670 IFM$="I" THENIX=IX+1
680 IFM$="A" THENIX=IX+2
690 IFM$="^" THENU=U^U(0):GOTO930
700 NEXT
710 IFIX=1 THENU=INT(U)
720 IFIX=2 THENU=ABS(U)
730 IFIX=3 THENU=INT(ABS(U))
740 GOTO860
750 FOR TX=2TOLEN(I$):IFMID$(I$,TX,1)=","
THEN765ELSE770
765 T1$=MID$(I$,2,TX-2):LL=LEN(I$)-TX:T2
$=MID$(I$,TX+1,LL)
766 GOTO780
770 NEXT
780 U=0:IFM$="C" THEN830
800 FOR TX=VAL(T1$)TOVAL(T2$):U=U+VAL(L$(
TX,YA)):NEXT:GOTO860
830 FOR TX=VAL(T1$)TOVAL(T2$):U=U+VAL(L$(

```



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XA,Tx)):NEXT
860 PRINT@P-1," 84 ";:PRINT@P,U;:L$
(XA,YA)=STR$(U)
865 IFLEFT$(L$(XA,YA),1)=" "THEN866ELSE8
70
866 L$(XA,YA)=RIGHT$(L$(XA,YA),LEN(L$(XA
,YA))-1)
870 RETURN
880 Tx=Tx+1:M$=MID$(I$,Tx,1):IFM$=","THE
N900
890 X$=X$+M$:GOTO880
900 Tx=Tx+1:M$=MID$(I$,Tx,1):IFM$="]"THE
N920
910 Y$=Y$+M$:GOTO900
920 X1=VAL(X$):Y1=VAL(Y$):U(O)=VAL(L$(X1
,Y1)):O=O+1:GOTO600
930 O=O+1:NEXT:GOTO170
940 FORYx=1TO43:FORXx=1TO9:IFI$(Xx,Yx)="
"THEN960
950 I$=I$(Xx,Yx):X$="":Y$="":XA=Xx:YA=Yx
:GOSUB540
960 NEXT:NEXT:GOSUB1240:FORO=98TO480STEP
32:PRINT@O,S1$;:NEXT
962 PRINT@482,S2$;:POKE29183,32
964 FORXx=1TO3:FORYx=1TO13:PRINT@Yx*32+X
x*10+57,L$(Xx+XS,Yx+YS);
966 NEXT:NEXT:GOTO170
970 INPUT"HIT <RETURN> TO SAVE";NA$
980 FORTx=1TO9:FORYx=1TO43:PRINT#"MIN",L
$(Tx,Yx),I$(Tx,Yx):NEXT
990 NEXT:GOTO170
1060 INPUT"HIT <RETURN> TO LOAD";TA$
1070 FORTx=1TO9:FORYx=1TO43:INPUT#"MIN",
L$(Tx,Yx),I$(Tx,Yx):NEXT
1080 NEXT:GOTO170
1110 I1$=""
1120 Tx=Tx+1:M$=MID$(I$,Tx,1):IFM$=">"TH
EN1140
1130 I1$=I1$+M$:GOTO1120
1140 U(O)=VAL(I1$):O=O+1:GOTO600
1150 IFI$="N"THEN170
1160 RETURN
1170 L$=MID$(C$,2,1)
1175 IFL$="H"THENXS=0:YS=0
1180 IFL$="L"ANDXS<>0THENXS=XS-2
1190 IFL$="R"ANDXS<6THENXS=XS+2
1200 IFL$="U"ANDYS<>0THENYS=YS-10
1210 IFL$="D"ANDYS<30THENYS=YS+10
1220 GOSUB1240:GOSUB1290

```

See
Correction


```

1230 POKE28749,50+XS:POKE28759,51+XS:POK
E28739,49+XS
1231 FORX=1TO3:FORY=1TO13
1232 PRINT@Y*32+X*10+57,L$(X+XS,Y+YS
);:NEXT:NEXT:GOTO170
1240 FORY=1TO13:FORX=1TO3:PRINT@Y*32+
X*10+57," 8a ";
1250 NEXT:NEXT:Z=58:FORA=28779TO29163ST
EP32:POKEA,Z
1260 POKEA+1,Z:POKEA+10,Z:POKEA+11,Z:
POKEA+20,Z:NEXT:RETURN
1290 FORY=1TO9:Px=28736+Y*32:Tx=YS/10-
1+49:POKEPx,Tx:NEXT
1300 FORY=10TO13:Px=28736+Y*32:Tx=YS/1
0+49:POKEPx,Tx:NEXT
1310 RETURN
1320 PRINT@0,"START ROW":INPUTA:PRINT@0,
" LAST ROW":INPUTB
1340 FORY=ATO B:FORX=1TO9
1350 LPRINTTAB((X-1)*9)L$(X,Y);
1360 NEXT:LPRINTCHR$(13);:NEXT:RETURN
2000 CLS:PRINT"COMMAND":PRINT@17,"SYNTAX
"
2010 PRINT" QUIT"TAB(13)"Q":PRINT" CELL
ENTRY"TAB(7)"GX,Y"
2020 PRINT" FUNCTION ENTRY  FX,Y":PRINT
" FUNCTION VIEW  UX,Y"
2025 PRINT" MOVE HOME"TAB(8)"MH"
2030 PRINT" MOVE LEFT"TAB(8)"ML":PRINT"
MOVE RIGHT"TAB(7)"MR"
2050 PRINT" MOVE UP"TAB(10)"MU":PRINT" M
OVE DOWN"TAB(8)"MD"
2070 PRINT" UPDATE"TAB(11)"U":PRINT" SAV
E TO TAPE  S"
2090 PRINT" LOAD FROM TAPE  L":PRINT" P
RINT"TAB(12)"P"
2115 PRINT" USE QUOTE MARKS FOR FORMULA
E":PRINT@491,"<RETURN>";
2120 Q$=INKEY$:IFQ$=""THEN2120
2130 IFQ$=CHR$(13)THENRETURNELSE2120
2200 PRINT@1,"ARE YOU SURE";:INPUTAN$
2210 IFAN$="YES"THENCLS:CLEAR50:END
2220 GOTO170

```

CORRECTION
To

Mini Calc.

APC: "There was one point which I omitted to mention in the documentation.

When writing numerical constants during the entry of functions, ensure that they are enclosed by '<' and '>'.

For example, to multiply the contents of cell 2,4 by 0.3, you would write:

"[2,47]*<.37>"

Also, the SAVE routine should be modified to prevent possible problems with 'INPUT#'ing strings with commas inside them. The following lines should now read:

And from Chris Stamboulidis who submitted the program 'Mini Calc' published in the October issue of

```
970 INPUT "HIT <RETURN> TO SAVE"; NA$:FOR T % = 1 TO 9: FOR Y%=  
1 TO 43  
980 PRINT#"MIN",CHR$(34)L$(T%, Y%),CHR$(34)I$(T%,Y%): NEXT:NEXT  
990 GOTO 170
```

APC 5(12) Dec. 84. p 214.